

CLAIMS

1. Method for biological purification of wastewater wherein the wastewater is purified first in a biofilm process and then in an activated sludge process all surplus biomass from the biofilm process or the main portion thereof is allowed to pass to the activated sludge process, **characterized in** that the biological degradation process in the biofilm process is operated under limitation of one of the nutrient salts, nitrogen or phosphorous by the quotient between the amounts of BOD₅ and biologically available nitrogen supplied to the biofilm process, being kept within the interval from 60:1 to 240:1, preferably within the interval from 80:1 to 180:1, particularly within the interval 100:1 to 150:1 and/or the quotient between the amounts of BOD₅ and biologically available phosphorus supplied to the biofilm process being kept within the interval from 300:1 to 1200:1, preferably within the interval from 450:1 to 900:1, particularly within the interval from 500:1 to 700:1.

2. Method according to claim 1, **characterized in** that the biofilm process is operated at a load within the interval from 2 to 20 BOD₅ per m³ process volume and 24 hours, preferably within the interval from 3 to 15 kg BOD₅ per m³ process volume and 24 hours, particularly within the interval from 4 to 10 kg BOD₅ per m³ process volume and 24 hours.

3. Method according to claim 1 or 2, **characterized in** that the biofilm process is arranged such that the carrier material for microbial growth in the process is kept completely or partly in suspension and movement by the supply of air to the process.

4. Method according to any of claims 1 to 3
characterized in that a partial flow of outgoing wastewater
from the separation step of the active sludge process is
returned to the biofilm process.

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5. Method according to any of claims 1 to 3
characterized in that further biologically available
nitrogen and/or phosphorus is dosed directly to the
activated sludge process.

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6. Method according to any of claims 1 to 5
characterized in that the biofilm process is performed in
two or more steps.

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